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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/845,823	04/30/2001	Thierry Bellier	944-003.084	2313

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EXAMINER

CHUNG, PHUNG M

ART UNIT	PAPER NUMBER
2133	6

DATE MAILED: 12/18/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/845,823

Applicant(s)

BELLIER ET AL.

Examiner

Phung M. Chung

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☐ Claim(s) ____ is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☐ Claim(s) ____ is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on ____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 4, 5.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

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1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

2. Claims 1-4, 6-7, 9 and 13-21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Raith (6,498,936).

As per claim 21, Raith discloses the invention substantially as claimed, comprising: a means for substituting a first error correction/detection code in a block with a second error detection code having a second number of bits smaller than the first number for obtaining a shortened block having a length;

A means for adjusting the length of the shortened block with tail bits for obtaining a modified shortened block;

A means for applying a convolutional code to the modified shortened block for obtaining a coded shortened block;

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A means for inserting a plurality of dummy bits into the coded shortened block in predefined bit locations for obtaining a modified coded block; and

A means for rearranging the bits in the modified coded block in an interleaving manner for obtaining an interleaved block containing the dummy bits in further bit locations determinable from the predetermined bit locations. (See col. 10, lines 30-48, col. 13 line 59 to col. 14 line 19). Raith does not specifically disclose a means for replacing the dummy bits in the interleaved block with bits indicative of the messages to be signaled between the mobile station and the base station. However, it would be a mater design choice to a person of ordinary skill in the art to replace the dummy bits with bits indicative of the messages to be signaled between the mobile station and the base station. This is because Raith discloses the second error detection code such as a Cyclic Redundancy Check (CRC) code with available bits which can be set as tail bits zero bits or dummy bits. These available bits can be replaced or inserted by bits representative of signaling messages, if so desired.

As per claims 1, 2, 3, 9, 10, 13, and 19-20, these methods claims are also rejected under the same rationale as set forth in the system claim 21.

As per claims 4 and 15, Raith further discloses: wherein the control channel comprises a slow associated control channel (SACCH). (See col. 10, lines 49-52).

As per claims 6-7, 14, 16, 17 and 18, Raith further discloses: the convolutional code is a $\frac{1}{2}$ convolutional code. (Col. 19, lines 12-13).

3. Claims 5, 8, 11 and 12 rejected under 35 U.S.C. 103(a) as being unpatentable over Raith (6,498,936) as applied to claims 1-4, 6-7, 9-10, and 13-21 above, and further in view of the admitted prior art.

As per claim 5, the teaching of Raith has been discussed above. Raith does not specifically disclose that the interleaved block is partitioned into a plurality of further blocks and each further block is mapped onto a SACCH burst containing a plurality of stealing flags. However, the admitted prior teaches such partition. (See pg. 1, lines 27-29). Therefore, it would have been obvious to a person of ordinary skill in the art, at the time the invention was made to incorporate the teaching of the admitted prior art into the invention of Raith to set the stealing flags to "1".

As per claim 8, Raith further disclose: wherein the second error detection code is a cyclic redundancy check (CRC) code (col. 13, lines 66-67) and the admitted prior art further disclose: wherein the first error correction/detection code is a FIRE code (pg. 1, line 24).

As per claim 11, the admitted prior art (pg. 1, lines 30-31) further discloses the step of puncturing one or more bits in the SACCH burst for conveying the messages.

As per claim 12, the teaching of Raith and the admitted prior art have been discussed above. They did not disclose the stealing flags are unused and the unused stealing flags in the SACCH burst can be used for conveying the messages. However, it would have been a matter of design choice to a person of ordinary skill in the art, at the time the invention was made, to use the unused stealing flags in the SACCH burst for conveying the messages, if so desired.

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4. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Phung M. Chung whose telephone number is 703-305-9686. The examiner can normally be reached on M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Albert Decady can be reached on 703-305-9595. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-305-3900.


PHUNG M. CHUNG
PRIMARY EXAMINER